

PLUMULARIA BANKSII.

P. banksii, Gray, "Dieff. N.Z.," II., 294.

Hydrosoma irregularly branched, composed of several tubes; branches alternately closely pinnate; pinnæ leaning to one side; reddish-brown. Hydrothecæ approximated, seated in the axil of a double incurved spinous process; aperture with an obtuse tooth on each side. Ovarian cells —?

Lyall Bay. (F.W.H.) A single specimen only.

ART. XXVIII.—*Contributions to the Ichthyology of New Zealand.*

By Captain F. W. HUTTON, F.G.S., C.M.Z.S.

(With Illustrations.)

[Read before the Wellington Philosophical Society, 28th August, 1872.]

1.* *Oligorus gigas*, Owen. (Cat., p. 1.)

This fish is no doubt the same as *Sciæna gadoides* of Dr. Solander, *Perca prognathus* of G. R. Forster, and *Polyprion cernuum* of Richardson, in Dieffenbach's "New Zealand," II., 206. By the rule of priority, therefore, it should be called *Oligorus gadoides*.

4. *Scorpius hectori*, Hutton. (Cat., p. 4.) Pl. VII.

A fresh specimen of this fish, caught in the Bay of Plenty, having been brought to the Colonial Museum enables me to correct and add to my former description.

B. 6; D. $\frac{10}{19}$; A. $\frac{3}{8}$; V. $\frac{1}{5}$; P. 17; L. lat., 67; L. trans., 7/25.

Teeth on the vomer, palatine bones, and tongue; cleft of the mouth very oblique; maxillary much expanded and truncated at the end, extending to the vertical from the middle of the eye; sixth dorsal spine the longest, less than half the length of the head, second anal spine very strong; scales finely serrated; caudal forked.

Uniform rose pink, passing into pale grey on the body.

Total length of the specimen, $17\frac{1}{4}$ inches.

11. *Chilodactylus spectabilis*, Hutton. (Cat., p. 8.) Pl. VII.

A fresh specimen of this fish having been brought to the Colonial Museum, I am enabled to give a better description of it than that in the "Catalogue of New Zealand Fishes," which was drawn up from a specimen that had been preserved in carbolic acid and dried.

* The numbers refer to those in the "Cat. of Fishes of New Zealand." Geol. Dept., N.Z., 1872, the additional species being in large type.

D. $\frac{16-17}{25-26}$; A. $\frac{3}{9}$; V. $\frac{1}{5}$; L. lat., 56; L. trans., 5/14.

Length three and one-third times that of the head, or three times the height of the body; six simple pectoral rays projecting beyond the membrane; fifth the longest, reaching to the perpendicular from the fifteenth or sixteenth dorsal spine; the lower rays graduated; branched rays simply divided only; sixth and seventh dorsal spines nearly equal and longest; the third anal spine longer than the second; scales rugose; lips very thick and fleshy; opercles with small scales; nostrils large, close together, the anterior with an appendage behind.

Brownish orange, with traces of six transverse bands of darker; soft dorsal, anal, caudal, and tips of ventrals blackish; lips and throat grey; belly silvery.

Total length of the specimen 24 inches.

13a. MENDOSOMA LINEATA, Forst.

C.M.

Pl. VII.

Sciæna lineata, Forst. *Latris lineata*, Rich., "Dieff. N.Z.," II., 209. *M. lineatum*, Gay, "Hist. Chile," Zool., II., 213; Günther, "Cat. Fishes in Brit. Mus." II., 85. *L. lineata*, Hector, "Cat. Col. Mus.," p. 83.

B. 6; D. $\frac{23}{25}$; A. $\frac{3}{19}$; P. 17; V. $\frac{1}{5}$; L. lat., 65; L. trans., 6/17.

Length four times that of the head, or three and a quarter times the height of the body; compressed; snout produced, going rather more than two and a half times into the length of the head; upper profile concave; interorbital space flat, one and a half times the diameter of the eye, which is one-fifth of the length of the head; top of the head above the eyes hollowed; lower jaw shorter; maxillary arched, with an obtuse angle on the superior margin; inter-maxillary with a swelling in the centre on the upper and outer margin; mouth very protractile; a few minute teeth on the centre of the upper jaw, none on the lower; cheeks, opercles, and top of the head, as far as the tip of the snout, covered with small scales; præoperculum and operculum entire, the upper margin of the latter sinuated; dorsal single, deeply notched, the sixth to the ninth spines nearly equal and longest, about one-third the length of the head, and equal to the anterior portions of the soft dorsal, and anal; anal spines moderate.

Above dark olivaceous grey, more or less marbled with blue; sides greenish silvery, with many thin olivaceous brown longitudinal stripes; belly greyish silvery; fins olivaceous.

This specimen, which was 14 inches in total length, was taken in Cook Strait, 1st August, 1872. Dr. Hector also obtained it in Milford Sound in 1863.

A drawing of the head is also given with the mouth protruded.

14. *Sebastes percooides*, Sol. (Cat., p. 9.) Pl. VIII.

15. *Scorpaena cruenta*, Sol. (Cat., p. 10.) Pl. VIII.

29. *Cyttus traversi*, Hutton. (Cat., p. 19.) Pl. IX.

Mr. W. Travers informs me that this fish was taken in a net in a tidal creek. When first caught it had a beautiful silvery appearance, and the filaments from the dorsal and ventral fins were very long, but have shrunk greatly since being put into spirits.

31a. NEPTOMENUS BILINEATUS. sp. nov.

C.M.

Pl. VIII.

B 6 ; D $6\frac{1}{38}$; A $\frac{2}{23}$; L. lat. 120 ?

Length three and three quarter times that of the head, which is equal to the height of the body ; snout considerably longer than the diameter of the eye ; posterior end of præoperculum straight, entire ; operculum with an obtuse point over the shoulder. Scales small and deciduous ; a second line, but without pores, runs below the lateral line from a little above the point of the operculum, and joins the lateral line at the end of the second dorsal. Pectorals pointed, not quite so long as the head, and not quite reaching to the vent.

Back and sides pale violet, with minute black dots ; belly silvery ; tip of both dorsals and inside the pectorals blackish.

Wellington harbour, November, 1872.

This species approaches *N. dobula* from Tasmania, but differs from that species in not having the anal spines detached, and in the proportion between the length and the height. In having apparently two lateral lines it resembles *N. travale* (Castelnau) from Victoria, but differs considerably from that species.

I will take this opportunity of correcting a mistake in my description of *Neptomenus brama* in the "Catalogue of Fishes of New Zealand ;" the length should be two and three-fourths the height of the body, and not four and three-fourths as there stated.

31b. DITREMA VIOLACEA, sp. nov.

C.M.

Pl. VIII.

B. 4 ? ; D. $\frac{10}{29}$; A. $\frac{3}{25}$; V. $\frac{1}{5}$; P. 19 ; L. lat., 93 ; L. trans., 14/28.

Length four times that of the head, or two and a half times the height of the body ; snout rather longer than the diameter of the eye ; teeth in villiform bands on both jaws, the vomer, and palatine bones ; upper profile convex ;

maxillary broad, produced to beyond the vertical from the anterior margin of the eye ; margin of the præoperculum striated and finely denticulated ; dorsal single, increasing in height as far as the second soft ray ; anal higher than the dorsal, less than half the length of the head ; pectorals shorter than the head, nearly twice as long as the ventrals, which are situated rather behind them ; caudal forked.

Above violet, passing into white below ; vertical fins violet at the base ; a spot of dark violet in the axils of the pectorals ; iris yellowish.

Wellington, 6th May, 1872.

This fish differs from the genus *Ditrema*, as characterized by Dr. Günther, in having teeth on the palate and a band instead of a single row on each jaw, but I do not think that this difference is sufficient to warrant a new genus being established for it. From *Platystethus* it differs both in having teeth on the palate, and in the dorsal fin.

It is said to be often mistaken for the warehou (*Neptomenus brama*), but the stronger dorsal spines, and the shorter pectoral fins easily distinguish it.

37. *Bovichthys variegatus*, Rich. (Cat., p. 24.)

Mr. Henry Travers brought a fine specimen of this fish from the Chatham Islands, which enables me to correct the description given in the "Catalogue of New Zealand Fishes," which was evidently taken from an immature specimen.

D 8-9 | 19 ; A 14.

Length two and three-quarter times that of the head, or four and three-quarter times the height of the body ; interorbital space more than half the diameter of the eye ; soft dorsal as high as the body beneath ; base of the spinous dorsal more than half the length of the soft ; head rather compressed ; interorbital space concave, with two small longitudinal ridges ; caudal slightly rounded, with the rays protruding ; ventrals not reaching to the vent ; lateral line with about eighty flat spines under the skin, directed alternately upward and downward.

Purplish brown, marbled with darker, and a few whitish marks on the back ; rays of the soft dorsal spotted with black.

The young, a specimen of which was also brought from the Chatham Islands, has five transverse black bars on the body and tail, and two on the caudal fin ; the soft dorsal also is lower.

40. *Notothenia cornucola*, Rich. (Cat., p. 26.)

C.M.

Specimens of this fish were brought by Mr. Henry Travers from the Chatham Islands, and I also saw it last January in Dunedin. The præoperculum is concave, and the top of the head is nearly smooth. The lateral



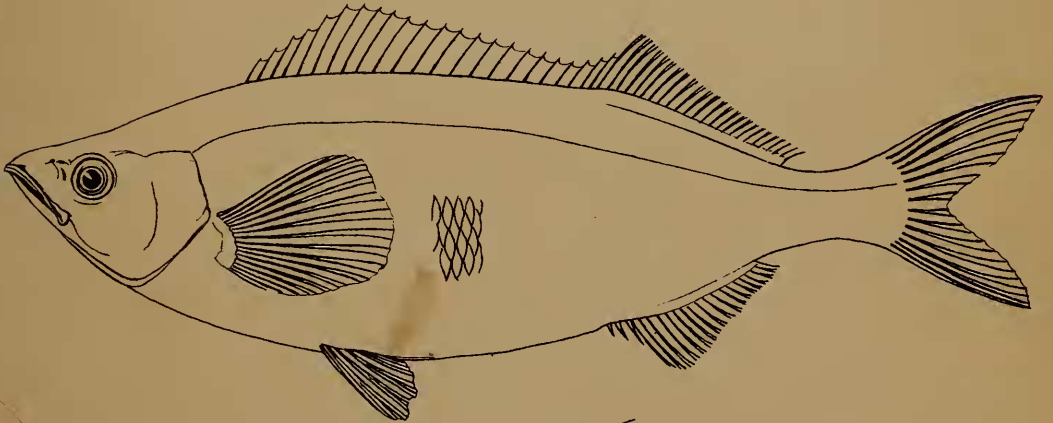
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SCORPIS HECTORI, Hutton.



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CHILODACTYLUS SPECTABILIS, Hutton.



13. a.



MENDOSOMA LINEATA, Forst.



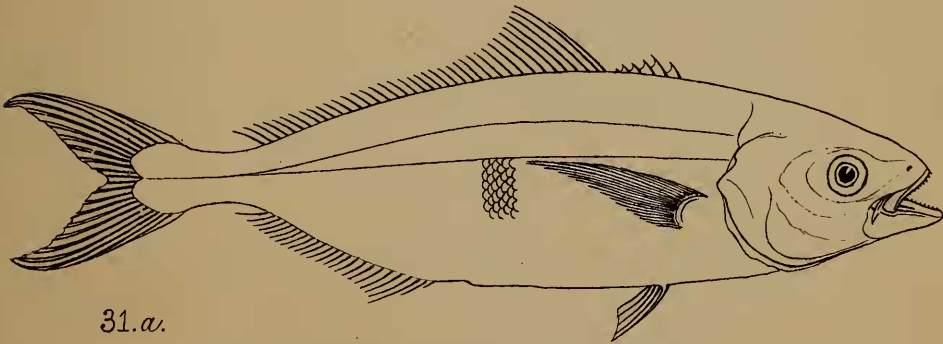
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SEBASTES PERGOIDES, Sol.



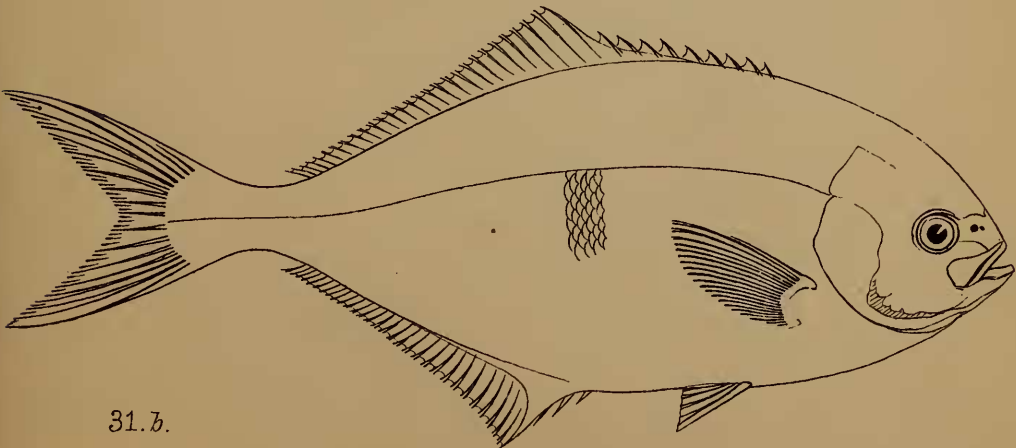
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SCORPÆNA CRUENTA, Sol.



31.a.

NEPTOMENUS BILINEATUS sp. nov.



31.b.

DITREMA VIOLACEA, sp. nov.

line extends to the end of the second dorsal, while the posterior portion begins under the tenth ray from the end of the second dorsal.

41. *Lepidotrigla brachyoptera*, Hutton. (Cat., p. 27.) Pl. XV.

44. *Gobius amiciensis*, C. & V. (Cat., p. 29.)

Carteret harbour is not in New Zealand but in New Ireland ; this fish should, therefore, be struck out of our list.

45. *Eleotris gobioides*, C. & V. (Cat., p. 29.) Pl. XV.

45a. ELEOTRIS RADIATA. Quoy.

C.M.

Pl. IX.

E. radiata, C. & V., "Hist. Nat. des Poissons," XII., 250.

D. $6\frac{1}{9}$; A. $\frac{1}{9}$; L. Lat., 30?

Length three times that of the head, or six times the height of the body ; interorbital space flat ; scales moderate, minutely ciliated ; snout moderate ; head depressed, the breadth being rather greater than the height. Colour (in spirits) pale yellowish red, with several vertical brown bands on the caudal. Total length of the specimen two inches. This specimen was obtained near the mouth of the river Thames, where it appears to be not uncommon. The natives call it "kurahina."

Valenciennes gives the following description of the colours of the specimen taken by Quoy :—Reddish, with twelve vertical brownish bands on each side ; fins whitish ; the first dorsal with two longitudinal black bands, the upper large and dentate ; the second dorsal with three less marked, the anal with one. The caudal with many vertical brown lines ; at the base of the pectorals a blackish straight line.

47. *Trypterygium nigripenne*, C. & V. (Cat., p. 31.)

This fish is very variable in colour, and sometimes the nasal tentacle is wanting. Two specimens brought by Mr. Henry Travers from the Chatham Islands have a purplish lunate spot on the base of the pectorals, and thus resemble *T. forsteri* ; but the fins were

D. 4-5 | 17-20 | 13-14 ; A. 21-25,

others were quite black, and others were of the typical colour. I am of opinion that *T. forsteri*, *T. fenestratum*, and *T. varium*, are only accidental varieties of *T. nigripenne*.

51. *Trypterygium compressum*, Hutton. (Cat., p. 32.) Pl. XV.

52a. CRISTICEPS AUSTRALIS, C. & V.

C.M.

C. australis, Günther, III., 275.D. 3 | $\frac{27-29}{5-8}$; A. $\frac{2}{23-25}$; V. $\frac{1}{3}$.

Length equal to three and three-quarter times that of the head, which is equal to the height of the body. The first dorsal commences above the posterior margin of the orbit, and is nearly twice as high as the second. The lateral line ceases before the end of the pectoral fins. A simple tentacle above the eye, and a pair of bifurcated ones over the snout. Colour (in spirits) uniform reddish.

Bay of Islands and Cape Campbell.

53. *Sticharium rubrum*, Hutton. (Cat., p. 33.) Pl. IX.

In a letter to Dr. Hector, Dr. Günther says that this fish does not belong to the genus *Sticharium*, but should be referred to *Clinus*. I kept both it and *Sticharium flavescens* out of *Clinus*, on account of the small number of soft rays in the dorsal, but as Dr. Günther says that they cannot be placed in the genus *Sticharium*, they will have to be called *Clinus rubrus* and *C. flavescens*, and will form a small group by themselves.

54. *Sticharium flavescens*, Hutton. (Cat., p. 33.) Pl. XV.

56a. TRACHYPTERUS ALTIVELIS, Kner. ?

A.M.

T. altivelis, Günther, III., 303.

D. 200? A. 0.

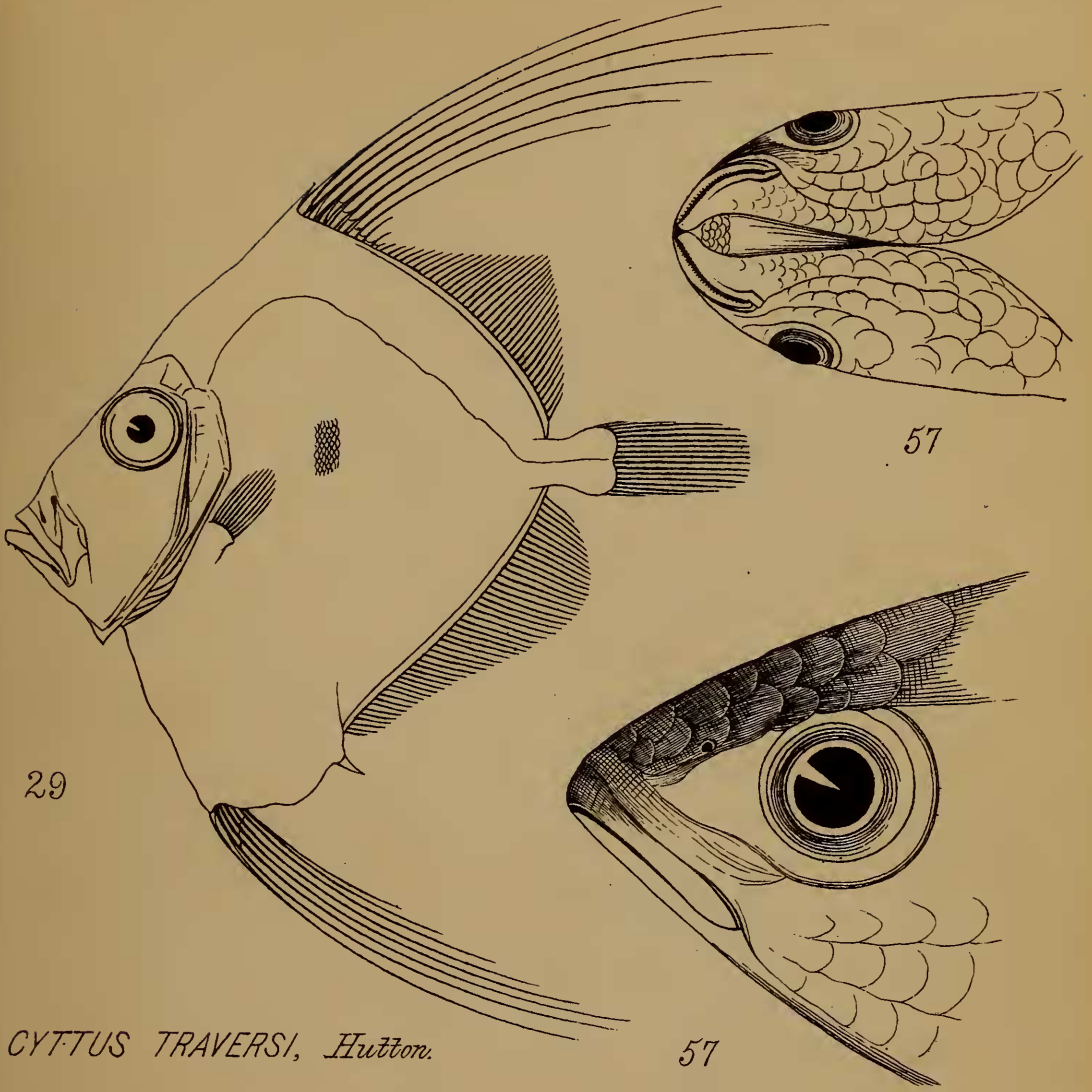
Length about seven times the greatest height of the body, which is at the base of the ventral fins ; caudal nearly as long as the head, pointing obliquely upwards ; upper profile deeply concave, descending rapidly from the eye ; muzzle truncated ; cleft of the mouth vertical. Total length 20 inches.

The above description is taken from a very bad specimen preserved in the Auckland Museum.

57. *Mugil perusii*, Val. (Cat., p. 36.) Pl. IX.

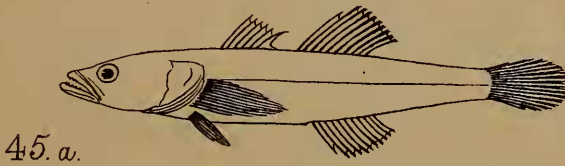
In a letter to Dr. Hector, Dr. Günther says that he thinks that our mullet is identical with *M. cephalotus*, C. & V. It appears to me to differ slightly from this species in having the head broader, in the length of the anterior dorsal spine being less than half the length of the head, and in its being placed rather nearer the snout than the root of the caudal.

Judging from descriptions only, I should be inclined to think that our fish comes nearer to *M. ramelsbergii*, but besides the head being broader, the posterior nostril is placed as in *M. cephalotus*. The second dorsal is also placed further back than in either of these species ; the angle formed by the



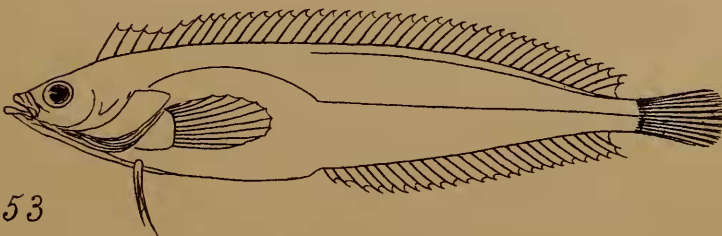
CYTTUS TRAVERSI, Hutton.

MUGIL CEPHALOTUS, Cuv. & Val.?
(Mullet.)



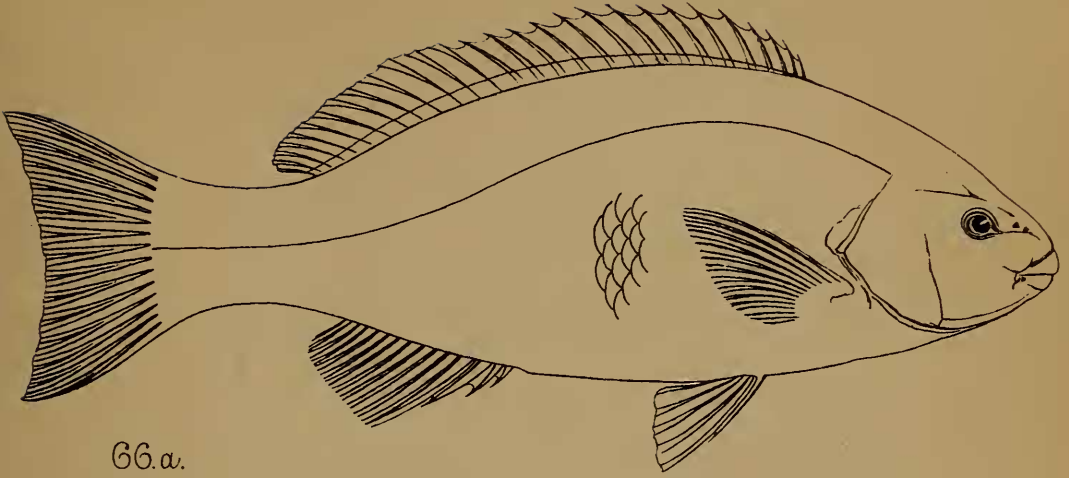
45. a.

ELEOTRIS RADIATA, Quoy.



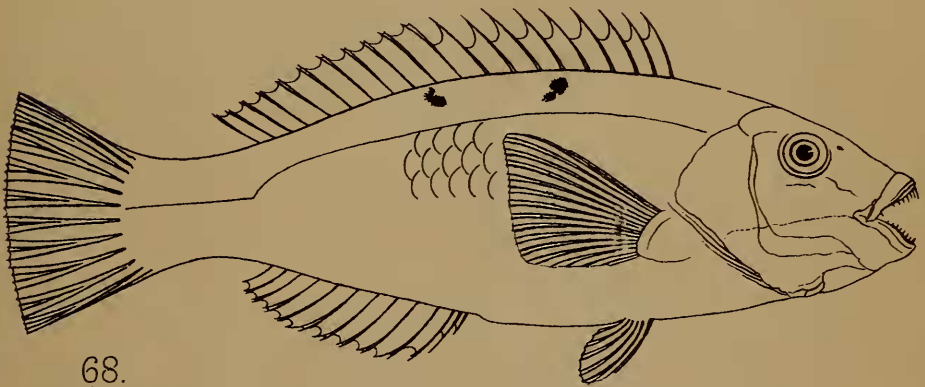
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CLINUS RUBRUM, Hutton.



66.a.

CTENOLABRUS KNOXI, sp. nov.



68.

LABRICTHYS BOTHRYOCOSMUS, Rich.
Spotty.



69.

LABRICTHYS PSITTACULA, Rich.
Parrot Fish.

